



ULSD fuel standards for non-road diesel engines and equipment, such as farm or construction equipment, become effective in California on the same dates as those for highway vehicles. Likewise, nonvehicular diesel fuel uses (e.g., stationary engines) are also subject to this rule either by state or local air district rules.

Intrastate locomotives and marine diesel fuels used in harbor craft must transition to 15 ppm ULSD fuel by January 1, 2007. Interstate locomotives and other types of marine vessels are not subject to California requirements but still subject to EPA's rules.

Effective Dates for ULSD Fuel in California	Refiners & Importers	Downstream from Refineries through Fuel Terminals	Retail Outlets
6/1/06	Import/produce 100% ULSD for use in California	All diesel must be ULSD	All diesel must be ULSD
7/15/06			
9/1/06			

One convenient web site can help answer your questions on the new Ultra Low Sulfur Diesel fuel.

visit www.clean-diesel.org

For more information, including guidelines on using biodiesel-ULSD fuel blends and more, along with links to other informational sites, log on today.

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- Diesel fuel classified as Low Sulfur Diesel may still be sold at retail locations outside of California between September 1, 2006 and December 1, 2010.
 - ULSD fuel requirements take effect at retail locations that sell diesel fuel in California by September 1, 2006.
 - Diesel fuel classified as ULSD must reach California distribution and marketing points downstream from refineries (i.e., pipelines, distributors, terminals and transporters) by July 15, 2006.
 - Diesel fuel they produce or import for use in California is ULSD-compliant. that 100 percent of the volume of the highway and non-road diesel that 100 percent of the volume of the highway and non-road diesel
 - By June 1, 2006, refiners and importers in California must ensure implemented by mid-2006.
- The new requirements for highway diesel fuel will be predominantly
- ULSD fuel will be the dominant diesel fuel produced after June 1, 2006.**

Diesel-powered engines and vehicles for the 2007 and later model year are designed with advanced emissions control systems and to operate only with ULSD fuel.

In combination with cleaner-burning diesel engines and vehicles, ULSD fuel will help to improve air quality by significantly reducing emissions.

To meet these new standards, the petroleum industry is producing Ultra Low Sulfur Diesel (ULSD) fuel, a cleaner-burning diesel fuel containing a maximum 15 parts-per-million (ppm) sulfur. By June 1, 2006, almost 100 percent of the diesel fuel produced or imported for use in California will be ULSD fuel, replacing most Low Sulfur Diesel fuel which contains up to a maximum of 500 ppm sulfur.

The U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB) have issued new standards to improve air quality.

New Ultra Low Sulfur Diesel fuel and new engines and vehicles with advanced emissions control systems offer significant air quality improvement.

Answers to important questions about the new, cleaner-burning diesel fuel, engines and vehicles.

ULTRA-LOW SULFUR HIGHWAY DIESEL FUEL
(15 ppm Sulfur Maximum)

Required for use in all model year 2007 and later highway diesel vehicles and engines.

Recommended for use in all diesel vehicles and engines.

LOW SULFUR HIGHWAY DIESEL FUEL
(500 ppm Sulfur Maximum)

WARNING: Federal law prohibits use in model year 2007 and later highway vehicles and engines. Its use may damage these vehicles and engines.

NON-HIGHWAY DIESEL FUEL
(May Exceed 500 ppm Sulfur)

WARNING: Federal law prohibits use in highway vehicles or engines. Its use may damage these vehicles and engines.

The new EPA standards require compliance from virtually everyone using diesel fuel and vehicles.

The full transition to ULSD fuel is complex and involves coordination at many levels. Many public and private organizations are collaborating through the Clean Diesel Fuel Alliance to facilitate the introduction of ULSD fuel. The U.S. Department of Energy (DOE), the U.S. Environmental Protection Agency, engine, vehicle and component manufacturers, all sectors of the petroleum industry, and fuel consumers, such as truckers, are providing comprehensive information and technical coordination.

For a complete list of participating organizations and contacts for detailed technical and implementation information regarding ULSD fuel, visit www.clean-diesel.org.

Answers to frequently asked questions about ULSD fuel.

Q Where can I purchase ULSD fuel?

A After September 1, 2006 all retail outlets that sell diesel fuel in California must sell ULSD fuel.

Q May I continue to purchase Low Sulfur Diesel fuel if I prefer to use it in my older vehicle?

A In California, all diesel fuel pumps should be dispensing ULSD fuel after September 1, 2006. You may be able to purchase Low Sulfur Diesel fuel outside of California. However, owners of 2007 and later model year diesel-powered highway vehicles must refuel only with ULSD fuel.

Q How will I know which pump is dispensing ULSD fuel?

A Outside of California, federal regulations require the labeling of all diesel fuel pumps to specify the type of fuel dispensed by each pump. Similar instrument panel and fuel inlet/fill cap labeling is being mandated for 2007 and later model year engines and vehicles that require ULSD fuel. Consumers are advised to check the pump labels (http://www.clean-diesel.org/images/diesel_pump_labels.pdf) and vehicle labels to ensure they are refueling with the proper diesel fuel consistent with their vehicle warranties.

Q How will ULSD fuel affect air quality?

A ULSD fuel will enable the use of cleaner technology diesel engines and vehicles with advanced emissions control devices, resulting in significantly improved air quality. Annual emission reductions will be equivalent to removing the pollution from more than 90 percent of today's trucks and buses, when the current heavy-duty vehicle fleet has been completely replaced in 2030.

Q May I continue to blend No. 1 diesel (kerosene) with my diesel fuel to improve cold weather performance?

A Only ultra low sulfur kerosene (No. 1 diesel with no more than 15 ppm sulfur) may be blended with ULSD fuel to improve cold weather performance. With so many kerosene formulations on the market, care must be taken to select kerosene with a maximum of 15 ppm sulfur. Blend rates will remain the same as with Low Sulfur Diesel fuel.

Q Will ULSD fuel be more expensive than the current Low Sulfur Diesel fuel?

A ULSD fuel costs more to refine and distribute than Low Sulfur Diesel fuel. The California Air Resources Board has estimated that it will cost refiners 2 cents to 4 cents more per gallon to produce 15 ppm sulfur diesel than current CARB Diesel. However, no one can predict with certainty the price of ULSD fuel at the pump. Many factors affect the consumer price of fuels, including the price of crude oil on the global market, geopolitical, weather, transportation and economic events, as well as supply and demand. Visit the Energy Information Administration and the California Energy Commission web sites for more information on fuel prices at: www.eia.doe.gov and www.energy.ca.gov.



Q How will ULSD fuel affect the power and fuel economy of existing diesel cars, trucks and non-road engines and equipment?

A Under typical operating conditions, there should be no noticeable impact on overall power using ULSD fuel. Fuel economy may be reduced slightly because the process that removes sulfur also can reduce the energy content of the fuel.

Q Will ULSD fuel affect the performance of my vehicle?

A Engine and vehicle manufacturers expect ULSD fuel to be fully compatible with the existing fleet, including 2006 and earlier model year vehicles. In some instances, the introduction of ULSD fuel to older vehicles may affect fuel system components or loosen deposits in fuel tanks. As part of a good maintenance program, owners and operators of existing cars, trucks and buses are encouraged to monitor their diesel-powered vehicles closely for potential fuel system leaks or premature fuel filter plugging during the change-over to ULSD fuel.

Q Can Low Sulfur Diesel fuel be burned without operational problems in 2007 model year and later cars and trucks?

A Diesel-powered engines for 2007 and later model year vehicles are designed to operate only with ULSD fuel. Improper fuel use will reduce the efficiency and durability of engines, permanently damage advanced emissions control systems, reduce fuel economy and possibly prevent the vehicles from running at all. Manufacturer warranties are likely to be voided by improper fuel use. Additionally, burning Low Sulfur Diesel fuel in 2007 and later model year diesel-powered cars, trucks and buses is illegal and punishable with civil penalties.

Q Will I need to put an additive in my fuel tank to replace the lubricity that was provided by the higher sulfur content?

A Like Low Sulfur Diesel fuel, ULSD fuel requires good lubricity and corrosion inhibitors to prevent unacceptable engine wear. As necessary, additives to increase lubricity and to inhibit corrosion will be added to ULSD fuel prior to its retail sale. With these additives, ULSD fuel is expected to perform as well as Low Sulfur Diesel fuel.

Q What are the penalties for failing to comply with CARB and EPA ULSD fuel standards?

A The new standards provide strong incentives for suppliers to provide the proper ULSD fuel formulation. Civil penalties of up to \$32,500 per violation per day can be assessed for non-compliance with ULSD fuel standards, or for misrepresentation of the sulfur level of diesel fuel. For more information about ULSD fuel standards and implementation, visit: www.epa.gov/otaq/diesel.htm#hd2007 and www.arb.ca.gov/homepage.htm.